

Proceedings of the American Academy of Arts and Sciences.

VOL. XLVII. No. 6. — JULY, 1911.

---

ISSUED,  
JUL 25 1911

CONTRIBUTIONS FROM THE GRAY HERBARIUM  
OF HARVARD UNIVERSITY.

NEW SERIES. — No. XXXIX.

By B. L. ROBINSON.

- I. On the Classification of certain *Eupatorieae*.
- II. Revision of the Genus *Barroetia*.
- III. On some hitherto undescribed or misplaced *Compositae*.

1870

1871

1872

1873

1874

1875

1876

1877

1878

1879

1880

1881

1882

1883

1884

1885

1886

1887

1888

1889

1890

1891

1892

1893

1894

1895

1896

1897

1898

1899

1900

1901

1902

1903

1904

1905

1906

1907

1908

1909

CONTRIBUTIONS FROM THE GRAY HERBARIUM OF HARVARD  
UNIVERSITY.—NEW SERIES, NO. XXXIX.

By B. L. ROBINSON.

Presented March 8, 1911. Received May 4, 1911.

I. ON THE CLASSIFICATION OF CERTAIN EUPATORIEAE

*Ageratum Gaumeri*, sp. nov., annuum erectum 4 dm. vel ultra altitudine copiose ramosum modice pubescens; caule tereti gracili meduloso; ramis oppositis adscendentibus foliosis; foliis ovatis acuminatis crebre et regulariter crenato-serratis tenuibus 3.5–6 cm. longis 2.5–4 cm. latis utrinque viridibus basi integris rotundatis vix ad insertionem petioli acuminatis, petiolo 1.5–2.2 cm. longo; inflorescentia per laxa in ramulis singulis racemiformi, pedicellis 2–4 (usque ad 6) cm. longis unicapitulatis cum bracteolis 1–4 filiformibus minimis munitis; capitulis oblate subsphaericis 7–9 mm. diametro; involucri squamis linearibus attenuatis costatis glabriusculis subaequalibus; disco conico; corollis limbum versus caeruleis; styli ramis longe exsertis pulcherrime caeruleis; achaeniis nigrescentibus 5-angulatis vix in angulis obscure hispidulis 1.2 mm. longis; pappi squamis 5, aliis saepissime brevioribus muticis, aliis in aristam longam desinentibus et achaeniam longitudine subaequantibus. — *Ageratum intermedium* Millsp. Field. Col. Mus. Pub. Bot. Ser. iii. 90 (1904), not Hemsl. — Izamal, Yucatan, Dr. G. F. Gaumer, no. 395 (type, in Gray Herb.). From the species here described *A. intermedium* Hemsl. differs in having stems of a decidedly firmer texture, presumably perennial and of a more spreading habit. The leaves are smaller and the heads are borne in rather compact 2–5-headed long-peduncled cymes. Finally the pappus is much shorter. From the common and somewhat variable annual species *A. conyzoides* L., the plant here described differs much in habit, in its more finely serrate leaves, greater smoothness, and especially in its loose open inflorescence, which on the individual branches becomes somewhat racemiform.

*Ageratum Peckii*, sp. nov., annuum erectum fastigiatim ramosum 5 dm. altum foliosissimum glabrum; radice fibrosa; caule subtereti basin versus crassiusculo nodoso, internodiis inferioribus brevibus, superiori-

bus gradatim longioribus gracilioribus atropurpureis folia longitudine superantibus; foliis lineari-oblongis integris 2.5-4.5 cm. longis 2.5-6 mm. latis obtusiusculis vel vix acutis basi subsessilibus vel petioliforme angustatis; cymis inaequaliter trichotomis, ramis lateralibus quam terminali multo longioribus usque ad 8 cm. longitudine; cymulis parvis 1-2.5 cm. diametro 3-7-capitulatis; bracteis subulatis; pedicellis 2-10 mm. longis bracteolatis; capitulis 3.5-4 mm. diametro; involucri squamis ca. 20 glabris anguste lanceolati-linearibus acutissimis plerumque 2-costatis; corollis glabris purpureis; achaeniis nigris acute 5-angulatis 1 mm. longis glabris; pappi squamis 5 lanceolatis scariosis apice setiferis 2 mm. longis. — British Honduras, in sandy open ground, on pine ridge near Manatee Lagoon, 25 July, 1905, *Prof. Morton E. Peck*, no. 80 (type, in Gray Herb.). A very distinct annual species with glabrous narrow entire leaves, commonly proliferous in the axils.

*Ageratum radicans*, sp. nov., glabrum prostratum ramosum ad nodos et etiam hinc inde inter eos radicans; caule teretiusculo brunneo vel stramineo-brunneo; internodiis 3-8 cm. longis; foliis oppositis anguste elliptico-oblongis integerrimis glabris 3-nerviis supra viridibus et cum nerviis impressis subtus pallidioribus impunctatis 4-8 cm. longis 5-15 mm. latis apice obtusiusculis basi petioliforme angustatis; inflorescentiis longe pedunculatis contractis cymosis paucicapitulatis; capitulis breviter pedicellatis 8-10 mm. diametro; involucri squamis anguste lanceolatis acutissimis plerumque 2-costatis subaequalibus (paucis exterioribus parvis exceptis) maturitate patentibus; flosculis glabris; corollis limbum versus purpurascens; achaeniis acute 5-angulatis ca. 1.2 mm. longis; pappi squamis 5 albis plus minusve erosis vel laceratis apice cum seta munitis ca. 2.2 mm. longis. — British Honduras, in fresh water pond near Manatee Lagoon, 4 August, 1905, *Prof. Morton E. Peck*, no. 99 (type, in Gray Herb.). This species, in technical characters exceedingly near *A. Peckii*, differs much in its prostrate and repent habit, its very much larger leaves, and slightly larger heads, flowers, and achenes.

*Podophania dissecta* (Hook. & Arn.), comb. nov. *Phania? dissecta* Hook. & Arn. Bot. Beech. 433 (1841). *Eupatorium dissectum* (Hook. & Arn.) Benth. Bot. Sulph. 113 (1844). *Podophania Ghiesbreghtiana* Baill. Bull. Soc. Linn. Par. i. 268 (1880). Repeated efforts to discover any distinctions between the types of Hooker & Arnott and of Baillon have failed to disclose any difference, the floral characters, foliage, and even pubescence appearing to be identical.

*HOFMEISTERIA FASCICULATA* (Benth.) Walp., var. *pubescens* (Wats.), comb. nov. *H. pubescens* Wats. Proc. Am. Acad. xxiv. 54 (1889). The glandular pubescence, although, when copious, as in the original speci-



men upon which Dr. Watson founded his species, becoming a striking feature, seems to be accompanied by no other differential character and is, as shown by later collections, by no means constant.

**Trichogonia capitata** (Rusby), comb. nov. *Eupatorium capitatum* Rusby, Bull. N. Y. Bot. Gard. iv. 380 (1907). An examination of a cotype of this species (*Bang*, no. 2114) in the Gray Herbarium shows not only that it has the general habit and foliage as in *Trichogonia*, but possesses the plumose pappus characteristic of that genus, to which accordingly it should be referred.

**EUPATORIUM BETONICIFOLIUM** Mill., var. **integrifolium** (Gray), comb. nov. *E. Hartwegi* Benth. Pl. Hartw. 19 (1839). *Coelestinia Hartwegi* (Benth.) Walp. Rep. ii. 545 (1843). *Conoclinium betonicum* DC., var. ? *integrifolium* Gray, Pl. Wright. i. 88 (1852). *Eupatorium betonicum* (DC.) Hemsl., var. *subintegrum* Gray, Syn. Fl. i. pt. 2, 102 (1884). *Conoclinium integrifolium* (Gray) Small, Fl. S. E. U. S. 1170, 1338 (1903). *Eupatorium betonicum*, var. *integrifolium* (Gray) Small, ll. cc.

**EUPATORIUM COELESTINUM** L., var. **SALINUM** Griseb. Cat. Pl. Cub. 146 (1866). This plant (Wright's no. 2811 from Cuba) though a marked form is described somewhat misleadingly thus: "forma foliis acute dentatis." The teeth of the leaves are in fact by no means acute, being in most instances actually rounded at the tip; but what furnishes the really striking difference between this form and the typical *E. coelestinum* is the fact that the leaves are considerably more deeply and somewhat doubly toothed. The blades also are of a more deltoid outline.

**Eupatorium frustratum**, sp. nov., perenne 3-9 dm. altum a basi paulo lignescenti ramosum, radice fibrosa, ramis teretibus striatis viridibus patente vel crispe puberulis adscendentibus, internodiis longiusculis folia multo superantibus; foliis oppositis petiolatis ovatis (vel eis ramulorum lanceolato-ovatis) 3-nerviis crenato-serratis obtusiusculis 1.5-3.2 cm. longis 0.8-2.2 cm. latis utrinque breviter pubescentibus; inflorescentia iterum atque iterum cymoso-furcata, axe principali in capitulo quasi abortive terminante (unde nomen); capitulis ovoideo-cylindricis 1 cm. longis 5 mm. diametro, involucri squamis multiseriatim imbricatis arete appressis viridi-striatis apice rotundatis valde deciduis, receptaculo elevato crassiusculo cylindrico 1.5 mm. alto minute papilloso; flosculis caeruleis; achaeniis olivaceis minute in faciebus sursum strigillosis. — *Ooclinium rigidum* Chapm. Bot. Gaz. iii. 6 (1878), not DC. *Eupatorium heteroclinium* Gray, Syn. Fl. i. pt. 2, 95 (1884), not Griseb. *Osmia heteroclina* Small, Fl. S. E. U. S. 1164 (1903), excl. syn. — South Florida: coral soil, Lignum Vitae Key,

*A. H. Curtiss*, no. 1195\* (type, in Gray Herb.); Key West, *Blodgett*; Jew Fish Key, *Chapman*; rich thicket, Key Largo, June, 1880, *A. H. Curtiss*, no. 171; Upper Metacumbe, 11 April, 1892, *J. H. Simpson*, no. 565. This species, long identified with the Jamaican *E. heteroclinium* Griseb., differs in having decidedly smaller heads, shorter leaves of a more deltoid contour, more obtuse involucreal scales, olivaceous instead of dark violet-brown achenes which are strigillose instead of smooth on their faces, and in other minor characters. Were these plants of Florida and Jamaica really identical, it would certainly be strange that their range did not include Cuba.

*EUPATORIUM GLABRATUM* HBK. Nov. Gen. et Spec. iv. 127 (1820). To the synonymy of this species should be added *E. xalapense* HBK. l. c. 128 (1820), and *E. gonocladum* DC. Prod. v. 171 (1836). The greater part of recently collected material of this affinity has been referred to *E. glabratum*, while *E. xalapense* and *E. gonocladum* have remained obscure. After examining at the herbarium of the Museum of Natural History in Paris original material of *E. glabratum* and *E. xalapense*, and at the De Candolle herbarium in Geneva the exceedingly fragmentary type of *E. gonocladum*, the writer has failed to detect any significant difference. Of the two earlier names, the more commonly used *E. glabratum* happily has priority of position.

*Eupatorium iodostylum*, sp. nov., fruticosum; ramis teretibus flexuosis brunneo-griseis plus minusve striatulis glabratiss; ramulis foliosis crispe vel patente purpureo-puberulis, pilis sub lente moniliformibus; foliis oppositis oblongo-lanceolatis undulate et subremote serratis tenuibus basi anguste acuminatis ad apicem verum subobtusum gradatim angustatis 10-16 cm. longis 3-3.6 cm. latis utrinque sparse obscureque pubescentibus penninerviis supra austere viridibus subtus vix pallidioribus; petiolo 1.8-2.8 cm. longo patente pubescenti; corymbis terminalibus erectis pedunculatis alternirameis multicapitulatis 6-10 cm. diametro convexis vel planiusculis; bracteis linearibus 1-2 cm. longis; ramulis inflorescentiae crispe purpurascenti-puberulis; pedicellis anthesi 5 fructu saepius ad 10 mm. longitudine; capitulis 26-34-floris graciliter campanulatis anthesi ca. 11 mm. altis 7-9 mm. diametro; involucri squamis ca. triseriatis linearibus ciliolatis laxè imbricatis, exterioribus herbaceis attenuatis 4-8 mm. longis, interioribus ca. 1 cm. longis perangustis tenuibus subscariosis acutis striatulis; corollis graciliter tubulosis 5-6 mm. longis apicem versus pulcherrime roseo-purpureis a basi ad apicem levissime ampliatis, faucibus nullis, limbi dentibus 5 deltoideis 0.8 mm. longis, antheris distinctis anguste oblongis apice appendiculatis basi integris; styli ramis longe exsertis filiformibus laete violaceis; achaeniis 3 mm. longis argute 5-costato-

angulatis glabris basin versus attenuatis; pappi setis gracillimis albis 25-30 corollam subaequantibus. — Limestone rocks, Trinidad Mountains, Santa Clara, Cuba, Arroyo Cimarron, altitude 470 m., *N. L. & E. G. Britton*, 5 March, 1910 (type, in Gray Herb.).

*Eupatorium* (§ *Imbricata*) *pluriseriatum*, sp. nov., fruticosum inflorescentia excepta glaberrimum; ramis arcuatis pallide griseo-brunnescentibus subteretibus lucidulis; ramulis purpurascentibus striatulis; foliis oppositis graciliter petiolatis ovatis firmiusculis longe falcatis attenuato-acuminatis denticulatis 9-12 cm. longis 4.5-5.5 cm. latis utrinque laete viridibus basi rotundatis sed ad insertionem petioli ca. 2.7 cm. longi in eo plus minusve acuminato-decurrentibus; panícula corymbosa oppositiramea multicapitulata densiuscula, axe et ramulis puberulis; capitulis (infeliciter immaturis) cylindraceis ca. 8 mm. altis 4 mm. diametro 7-10-floris breviter pedicellatis vel in apicibus ramulorum subsessilibus et fasciculatim aggregatis; involucri squamis valde inaequalibus multiseriatim imbricatis glabris subscariosis viridi-striatulis fimbriati-ciliolatis, apice rotundatis, margine saepius brunnescentibus quasi ustis, a receptaculo cylindrico truncato caducis; corollis glabris graciliter tubulosis quam achaenis etiam glabris multo longioribus; pappi setis tenuibus corollas subaequantibus sursum minute scabratis. — On bank; Aguacate, altitude 750-850 m., Trinidad Mountains, Santa Clara, Cuba, 10-11 March, 1910, *N. L. Britton & Percy Wilson*, no. 5407 (type, in Gray Herb.).

*EUPATORIUM URTICAEOFOLIUM* Reichard, var. *tomentellum*, var. nov., formae typicae habitu statura foliis etc. simile; caule ab apice usque infra mediam partem dense breviterque crispe griseo-tomentello; foliis plerumque subtus tomentellis. — Madison, Wisconsin, 28 August, 1893, *Judge J. R. Churchill* (type); Mt. Carmel, Illinois, 1875, *Dr. D. Schneck* (Gray Herb.); edge of maple forest, Marquette, Michigan, 12 August, 1901, *Bronson Barlow* (Gray Herb.). This variety differs from *E. urticaefolium*, var. *villicaule* Fernald of the middle Atlantic States in having a very much shorter closer non-viscid indumentum.

*Mikania cristata*, sp. nov., robusta scandens; caulibus angulato-striatis puberulo-tomentellis, internodiis usque ad 1.7 dm. longis; foliis oppositis longe petiolatis late ovatis profunde cordatis acuminatis firmiusculis integriusculis utrinque breviter velutino-tomentosis a basi 3-5(-9)-nerviis; petiolis robustis recurvatis tortis anguineis ca. 5 cm. longis basin versus crassioribus, eis ejusdem jugi membrana stipulari margine appendicibus caudiformibus conspicue cristata connexis; capitulis 4-floris corymbosis ca. 9 mm. longis breviter pedicellatis, corymbis oppositis pedunculatis ca. 1 dm. diametro, pedunculis (4-6 cm. longis) et inflorescentiae ramulis valde compressis; involucri

squamis oblongis obtusiusculis ca. 6 mm. longis, exterioribus dorso puberulis; corollae tubo cylindrico curvato glabro 3 mm. longo, faucibus nullis, limbi dentibus 5 oblongo-linearibus patentibus 1.8 mm. longis obtusiusculis; achaeniis glabris 5-costato-angulatis deorsum attenuatis 3.6 mm. longis; pappi setis ca. 50 rufis 4.5 mm. longis laevibus. — Bushy places, La Palma, Costa Rica, September, 1898, altitude 1459 m., *Ad. Tonduz*, no. 12,583 (type, in U. S. Nat. Mus., fragm. in Gray Herb.). A species well marked by the conspicuously crested stipular appendages.

**Mikania hexagona** sp. nov., fruticosa robusta scandens; caulibus lignosis tortis acute et subalato-hexagonis atrobrunneis cavis 1 cm. diametro, internodiis longissimis (3 dm. et ultra); ramis oppositis alato-hexagonis praecipue in angulis tomentellis; foliis late ovatis acuminatis integris 1 dm. longis 7 cm. latis basi rotundatis in petiolum 2.5 cm. longum plus minusve cuneatum decurrentibus paulo supra basin 7-nervatis utrinque scabro-puberulis viridibus infra paulo pallidioribus, superioribus et floralibus multo minoribus subsessilibus; inflorescentiis composite corymbosis ca. 2 dm. diametro densiusculis; bracteis herbaceis ovato-lanceolatis acuminatis tenuibus, ultimis involucri squamas saepe aequantibus dorso obscure puberulis; pedicellis gracilibus 3-5 mm. longis; involucri squamis anguste lanceolato-oblongis acuminatis tenuibus pallide viridibus glabriusculis; corollis 5 mm. longis glabris, tubo proprio 2.5 mm. longo gracili firmiusculo, faucibus bene distinctis campanulatis vix 1 mm. altis, dentibus limbi oblongis crispis ca. 2 mm. longis saepe conniventibus; achaeniis 5-angulatis ca. 4 mm. longis deorsum decrescentibus; pappi setis ca. 70 ca. 5 mm. longis rufescentibus; styli ramis filiformibus nec clavellatis 4 mm. longis. — Near Tovar, Venezuela, 1854-55, altitude 1700 m., *A. Fendler*, no. 626 (type, in Gray Herb.). A species seemingly well marked by its very robust hexagonal stem with acute narrowly wing-margined angles.

**Mikania leucophylla** (Rusby), comb. nov. *Willoughbya leucophylla* Rusby, Bull. N. Y. Bot. Gard. iv. 382 (1907).

**Mikania longiflora** (Rusby), comb. nov. *Willoughbya longiflora* Rusby, Bull. N. Y. Bot. Gard. iv. 382 (1907).

**MIKANIA MYRICAEFOLIA** (Bojer) DC. Prod. v. 188 (1836). *Trixis myricaefolia* Bojer in litt. ex DC. l. c. Examination of the type of this plant of Madagascar, kindly permitted by Mr. Casimir de Candolle, showed that it has alternate thickish leaves narrowed at the base to short but slender petioles, heads (all in bud) nearly cylindrical, involucre scales 6 to 7, and florets 10 to 11. Although from the very immature heads it is impossible to ascertain satisfactorily the style characters or other details regarding the florets, it is nevertheless cer-

tain from the number of involueral scales and of the florets in the head that the plant is not a *Mikania*, nor from its habit and alternate leaves does it seem likely that it belongs in the tribe of the *Eupatorieae*.

*Mikania paezensis*, sp. nov., scandens; caule et ramulis striatis a tomento brevi fusco vel atropurpureo etiam fere nigrescenti tectis; foliis longiuscule petiolatis oppositis ovatis acutis crenato-denticulatis supra bullato-rugosis pubescentibus subtus pallidioribus tomentosis basi sinu patenti cordatis ca. 4.5 cm. longis ca. 3.5 cm. latis; petiolo tomentoso 3–3.5 cm. longo; corymbis ad 7 cm. longe pedunculatis 6–10 cm. diametro planiusculis tomentellis, bracteis foliaceis reductis 0.8–1.6 cm. longis ovatis petiolatis, pedicellis gracilibus 4–6 mm. longis; capitulis ca. 12 mm. longis; involucri squamis lanceolato-oblongis acutiusculis dorso fusco-tomentellis 8–9 mm. longis; corollis 5–6 mm. longis, tubo gracili, faucibus campanulatis, limbi dentibus 5 latissime triangularibus erectiusculis apicem versus tomentellis; achaeniis 5 mm. longis atrobrunneis glabris deorsum decreescentibus argute 5-costato-angulatis; costis albidis minutissime scabratis. — Las Escaleretas, Moras Valley, Rio Paez basin, Tierra Adentro, State of Cauca, Colombia, altitude 2500–3000 m., February, 1906, *Pittier*, no. 1336 (type, in U. S. Nat. Mus., fragm. in Gray Herb.). Notwithstanding its constantly 5-angled achenes this species seems to be suspiciously near the plant described below as *Kaninia violascens*. The two differ sufficiently in leaf-form, indumentum, length of peduncles, size of heads, etc., to be satisfactory as species, but in placing them in different genera (though their technical characters appear to require it) there seems to be some artificiality.

*MIKANIA PARVIFLORA* (Aubl.) Karst. *Deutsche Fl.* 1061 (1883); Urb. ex Hieron. in *Engl. Bot. Jahrb.* xxviii. 579 (1901). *Eupatorium parviflorum* Aubl. *Fl. Guian.* ii. 797, t. 315 (1775). — To the synonymy of this widely distributed and moderately variable species should be added, in the opinion of the writer, the following: *Mikania olivacea* Klatt, *Bull. Soc. Bot. Belg.* xxxi. 195 (1892); Rob. & Greenm. *Proc. Am. Acad.* xxxii. 12 (1896), and *Willoughbya Hieronymi* Rusby, *Bull. N. Y. Bot. Gard.* iv. 383 (1907). As thus interpreted, this species ranges from Costa Rica to Guiana and Bolivia.

*Mikania sulcata* (Hook. & Arn.), comb. nov. *Eupatorium sulcatum* Hook. & Arn. *Comp. Bot. Mag.* i. 243 (1835). *Mikania pentstemonoides* DC. *Prod.* v. 189 (1836). *M. pentstemonoides* Bak. in *Mart. Fl. Bras.* vi. pt. 2, 221 (1876).

*Mikania sulcata* (Hook. & Arn.) Robinson, var. *ambigua* (DC.), comb. nov. *M. ambigua* DC. *Prod.* v. 187 (1836). *M. pentstemonoides*, var. *ambigua* (DC.) Bak. in *Mart. Fl. Bras.* vi. pt. 2, 221 (1876).

*Mikania ternata* (Vell.), comb. nov. *Cacalia ternata* Vell. Fl. Flum. (text) 336 (1825), viii. t. 56 (1827). *Mikania dentata* Spreng. Syst. iii. 422 (1826) presumably, but scarcely of Schlecht. Linnaea, xi. 12 (1837), which notwithstanding the sign of affirmation employed by Schlechtendal can from character hardly have related to the plant described by Sprengel. *M. apiifolia* DC. Prod. v. 202 (1836).

*Kanimia corymbiifolia*, sp. nov., herbacea perennis erecta rigida glaberrima 6-7 dm. alta usque ad inflorescentiam corymbosam simplici, internodiis infimis brevibus (2-15 mm. solum longis), supremis usque ad 6 cm. longitudine; foliis oppositis erectis appressis linearibus crassiusculis rigidulis integerrimis 3-nerviis obtusis sessilibus 4-7 cm. longis 1-3 mm. latis superioribus gradatim minoribus; inflorescentia trichotoma 3-11 cm. lata planiuscula 4-20-capitulata; bracteis anguste linearibus plus minusve alternis 8-12 mm. longis; capitulis (quoque cum bracteola unica arcte suffulto) 1.3 cm. altis 4-floris erectis; involucri squamis ovato-oblongis crassiusculis acutiusculis 2-3 mm. latis; corollis 7 mm. longis, tubo gracili 3 mm. longo, faucibus brevissimis, limbi dentibus lineari-oblongis; achaeniis immaturis 4.5 mm. longis summa parte 10-costato-angulatis; pappi setis ca. 44 rufis 6 mm. longis scabridis. — Moist meadows near a brook in the Serradão near Cuyabá, Mattogrosso, Brazil, February, 1889, *R. Pilger*, no. 220 of Dr. Hermann Meyer's second Brazilian journey. Type in the herbarium of the Royal Botanical Gardens, Berlin; fragments and tracing in the Gray Herbarium. A species markedly distinct in habit from its congeners, resembling in its thickish firm ribbed narrow leaves some species of the African genus *Corymbium*.

*Kanimia violascens*, sp. nov., scandens ubique a hirsutia densa sordida violascenti tecta; caule flexuoso torto multi-angulato, internodiis 6-9 cm. longis; foliis oppositis petiolatis ovalibus grosse crenatis profunde cum sinu angusto cordatis ca. 4 cm. longis ca. 3.5 cm. latis apice rotundatis crassiusculis bullato-rugosis; petiolo 1.5-2 cm. longo; corymbis trichotomis axillaribus erectis ad 2 cm. longe pedunculatis cum bracteis foliaceis suborbicularibus munitis; bracteolis parvis ovalibus; pedicellis 4-8 mm. longis; capitulis 1.2-1.5 cm. altis 4-floris; involucri squamis oblongis apicem versus carinatis plus minusve attenuatis sordide villosa-tomentosis ca. 9 mm. longis; corollis 7 mm. longis, tubo gracili glabro 4 mm. longo, faucibus campanulatis glabris; dentibus limbi 5 deltoideis erectiusculis apicem versus hispidulis; achaeniis 5.5 mm. longis nigris basin versus decreascentibus, costis plerumque 7-8 (rariter in eodem capitulo achaenio uno vel altero 5-costato) albidis minutissime scabridis, pappi setis ca. 75 rufidulis corollam aequantibus; styli ramis gracillimis filiformibus longe exsertis et recurvatis

antheris linearibus apice cum appendice ovata obtusa scariosa munitis. — Alto del Tabano among the Andes of the southern Cordillera of Colombia, altitude about 3500 m., 4 May, 1876, *E. André*, no. 3123 (type, in Gray Herb.).

*Brickellia amplexicaulis*, sp. nov., herbacea vel fruticulosa 1.3–1.8 dm. alta; caulibus teretibus medullosis saepe purpureis copiose et patente glandulari-pubescentibus; foliis oppositis oblongis vel saepius ovato-oblongis crenato-serratis vel -dentatis basi arcte sessilibus late cordato-amplexicaulibus ad apicem obtusiusculum angustatis 8–13 cm. longis 2.5–5.8 cm. latis utrinque pubescentibus subtus paulo pallidioribus saepe indumento densiori tectis pinnativenatis et a loco 1–1.5 cm. supra basin 3-nerviis; inflorescentia elongata laxe paniculata folioso-bracteata; pedicellis ad 5 cm. longis filiformibus patente adscendentibus; capitulis 1.2–1.5 mm. altis ca. 13-floris; involucri squamis angustis tenuibus attenuatis valde inaequalibus viridibus vel saepe purpureascentibus vel etiam atropurpureis saltem exterioribus patente ciliolatis; corollis 9 mm. longis gracillimis exacte tubulatis glabris, faucibus nullis, limbi dentibus brevissimis erectis; styli ramis erectis nigrescentibus modice clavellatis; achaeniis breviter sed dense hirsutulis; pappi setis 50–60 laete albis quam corolla distincte brevioribus. — *B. Wislizeni* var. Gray, Pl. Wright. ii. 71 (1853). *B. Wislizeni*, var. *paniculata* Gray acc. to Pringle, Pl. Mex. (1885), nomen nudum. — SONORA: near Santa Cruz, 1851, *Charles Wright*, no. 1136 (type, in Gray Herb.); Huchuerachi, 4 December, 1890, *Hartman*, no. 325; Oakridge Pass, *Hartman*, no. 333. CHIHUAHUA: rocky hills near the city of Chihuahua, 8 October, 1885, *Pringle*, no. 609; Sierra en Media, 28 September, 1899, *E. W. Nelson*, nos. 6475 and 6491; near Batopilas, 3–4 October, 1898, *E. A. Goldman*, no. 204. SINALOA: Cerro Colorado, 3 November, 1904, *Brandege*. — This species, though somewhat variable in the breadth and toothing of the leaves, seems to be constant and readily recognizable as to essentials. It is readily distinguished from *B. Wislizeni* by its smaller decidedly fewer-flowered heads, looser inflorescence, and larger leaves.

Var. *lanceolata* (Gray), comb. nov., foliis quam eis formae typicae multo angustioribus lanceolato-oblongis minus amplexicaulibus ca. 6 cm. longis 1.2–1.5 cm. latis. — *B. Wislizeni* Gray, var. *lanceolata* Gray, Syn. Fl. i. pt. 2, 107 (1884). — San Francisco Mountains, near Clifton, Arizona, 1 November, 1880, *E. L. Greene* (type, in Gray Herb.).

*Brickellia brasiliensis* (Spreng.), comb. nov. *Eupatorium brasiliense* Spreng. Syst. iii. 417 (1826); DC. Prod. v. 182. *Clavigera pinifolia* Gardn. in Hook. Lond. Jour. Bot. v. 461 (1846). *Brickellia pinifolia* Gray, Pl. Wright. i. 84 (1852); Bak. in Mart. Fl. Bras. vi. pt.



2, 372 (excl. syn. *Carphephorus coridifolius* DC., which is clearly distinct). *Mikania ericoides* Mart. ex Bak. l. c. (1876).

**Brickellia coridifolia** (DC.), comb. nov. *Carphephorus coridifolius* DC. Prod. vii. 267 (1838). This species, resting solely upon the original material collected on the Serro do Frio, Minas Geraes, Brazil, in 1833, *Vautier*, no. 314, was placed by DeCandolle in the genus *Carphephorus* doubtless because he found the receptacle chaffy at least to some extent. Dissection of a head from a cotype in the Gray Herbarium shows the receptacle to be chiefly free from chaff. At only one point two narrow scales, like the inner ones of the involucre, were crowded in among the flowers, and formed, as it were, a sort of re-entrant part of the involucre. In all other respects the plant agrees technically with *Brickellia*. Mr. J. G. Baker, in treating the *Eupatorieae* for the Flora Brasiliensis, doubtfully reduces the species to a synonym of *Brickellia pinifolia* (Gardn.) Gray—a species above reduced to *B. brasiliensis* (Spreng.) Robinson—but the plant, when compared with *B. brasiliensis* is obviously distinct. The involucreal scales for instance are very different, being in *C. coridifolius* nearly twice as long as in *B. brasiliensis*. They are furthermore much more attenuate, distinctly 3-ribbed, and dorsally glandular-puberulent, while in *B. brasiliensis* they are glabrous and minutely many-striate. In involucre the plant agrees much better with *Brickellia* than with the North American genus *Carphephorus*. Moreover, the limb of the corolla is very short as in *Brickellia* instead of being rather deeply cleft as in *Carphephorus*. The affinities of the species appear to be with *B. brasiliensis*, though without doubt the plant is specifically distinct. The species being little known it seems worth while to put on record the traits brought out by recent examination. Capitulis 8-floris turbinato-campulatis 1.2 cm. altis ca. 1 cm. diametro; involucris squamis lanceolatis vel anguste oblongis acutis dorso convexis tomentellis striatulis ca. 3-seriatis valde inaequalibus; receptaculo parvo plano cum paleis paucissimis marginalibus irregulariter munito; pappi setis ca. 30 barbellatis corollas aequantibus; corollis 7–8 mm. longis vix sursum ampliatis, dentibus limbi 5, 0.5 mm. longis; styli ramis clavellatis; antheris anguste oblongis vix connatis apice breviter et late appendiculatis basi integris; achaeniis immaturis 2 mm. longis papillo-sis deorsum decrescentibus 5-costato-angulatis cum nerviis obscuris intermediis.

**BRICKELLIA DIFFUSA** (Vahl) Gray, Pl. Wright. i. 86 (1852). *Eupatorium diffusum* Vahl, Symb. Bot. iii. 94 (1794). To the synonymy of this species should be added *Eupatorium trichosanctum* A. Rich. Fl. Cub. Fanerog. ii. 41 (1853), the type of which was recently examined by



the writer in the herbarium of the Museum of Natural History at Paris.

*BRICKELLIA SCOPARIA* (DC.) Gray, var. *subauriculata*, var. nov., foliis basin versus paulo ampliatis ad 7 mm. latitudine subauriculatis, auriculis brevissimis rotundatis, margine revolutis. — Hills of Zacatecas, Mexico, 25 October, 1888, *Pringle*, no. 1766 (type, in Gray Herb.); also en route from San Luis Potosi to Tampico, December, 1878, to February, 1879, *Palmer*, no. 1077. The hitherto unpublished herbarium name of this variety has been on some plant-labels attributed to Dr. Gray, but this seems to have been an error. So far as can be ascertained from the material and records at the Gray Herbarium, Dr. Gray regarded Palmer's no. 1077 as typical *B. corymbosa*, and the Pringle plant was not collected until after Dr. Gray's death. Under these circumstances it seems undesirable, as it is unnecessary, to employ a parenthetical authority in this case.

*Kuhnia adenolepis*, sp. nov., perennis, caulibus saepe 2 gracilibus e caudice lignescenti oriuntibus erectis summa parte minutissime puberulis 6-8 dm. altis teretibus obscure striatulis purpureis; foliis alternis, infimis ante anthesin delapsis, intermediis anguste lanceolatis integerrimis longe attenuatis 6-7 cm. longis 7 mm. latis saepe falcatis patentibus utrinque viridibus glabris puncticulatis basi 3-nerviis; foliis superioribus gradatim minoribus, eis ramorum floriferum parvis linearibus; capitulis paucis 2-3 in ramis gracilibus elongatis bractiferis solitariis terminalibus erectis vel leviter nutantibus 12-13 mm. diametro 18 mm. altis ca. 10-12-floris; involucri squamis viridibus albidostriatis multiseriatim imbricatis, saltem exterioribus cum glandulis nigrescentibus subsessilibus eleganter ciliolatis; corollis gracilibus apicem versus atropurpurascentibus, dentibus limbi brevissimis suberectis; styli ramis nigrescentibus clavellatis conspicue exsertis; pappi setis valde plumosis leviter fulvescentibus. — Chapala Mountains, near Guadalajara, Mexico, 13 December, 1889, *C. G. Pringle*, no. 2933 (type, in Gray Herb.). A species of graceful habit and seemingly unique in its curiously glandular-ciliolate involucre bracts.

*LIATRIS TENUIFOLIA* Nutt., var. *laevigata* (Nutt.), comb. nov., quam forma typica conspicue robustior; foliis 4-8 mm. latis coriaceis; capitulis saepe sed non semper paulo majoribus etiam ad 9 mm. longitudine. — *L. laevigata* Nutt. Trans. Am. Phil. Soc. vii. 285 (1840). *L. tenuifolia* Nutt. β Torr. & Gray, Fl. ii. 70 (1841). *Lacinaria laevigata* (Nutt.) Small, Fl. S. E. U. S. 1175 (1903). *Laciniaria laevigata* (Nutt.) Small, l. c. 1339. — To this variety may be referred Mr. Nash's nos. 1669 and 2599 from Eustis, Florida, while Prof. Hitchcock's no. 154 from Marco, Florida, represents a transition to the more slender typical form. It is

believed that few persons will be disposed to follow the older authors in uniting without distinction of name plants so conspicuously different in their foliage as *L. tenuifolia* and *L. laevigata*, yet on the other hand intergradation seems to be demonstrated and there are no differences of much taxonomic significance. To maintain the larger plant as a distinct species on the sole ground of its greater robustness, seems as undesirable as to suppress it altogether.

## II. REVISION OF THE GENUS BARROETEA.

BARROETEA Gray. (Clarissimo G. Barroeta doctori medicinae et professori scholae metallorum ad oppidum mexicanum San Luis Potosi dictum institutae ob amicitiam suam cum collectoribus botanicis doctoribus Parryo et Palmero petito eorum dedicata.) — Capitula medicoria 17–35-flora; involucri campanulati vel turbinati squamis valde inaequalibus appresse imbricatis tenuibus costato-lineatis saepius attenuatis raro obtusis vel apice rotundatis mucronulatisque; receptaculo plano nudo. Corollae tubulatae glabrae pallidae ad insertionem filamentorum plus minusve constrictae, faucibus vix ullis, limbo breviter 5-dentato. Antherae distinctae vel levissime connatae, apice in appendicem latam obtusissimam productae, basi rotundatae integrae. Styli rami clavellati vel apud speciem unicam valde sursum incrassati, paulo exserti. Achaenia valde obcompressa anguste oblonga, margine sursum scabrata vel ciliolata, in facie exteriori vel uninervia vel conspicue unicostata, in facie interiori 2–3-nervia vel -costata. — Proc. Am. Acad. xv. 29 (1879), xvii. 206 (1882); Hemsl. Biol. Cent.-Am. Bot. ii. 102 (1881); Hoffm. in Engl. & Prantl, Nat. Pflanzenf. iv. Abt. 5, 142 (1890). *Barroetia* Hook. f. & Jacks. Ind. Kew. i. 276 (1893); Dalla Torre & Harms, Gen. Siphon. 528 (1905). — Herbae graciles annuae vel perennes nonnunquam basi paulo lignescentes saepius ramosae foliosae crispe puberulae vel tomentellae rarius glanduliferae. Folia vel omnia opposita vel superiora alterna ovata petiolata vel sessilia crenati-vel argute serrati-dentata, apice et dentibus saltim posticis in appendices setiformes desinentibus. Capitula saepius in panicula laxiuscula foliaceo-bracteata disposita.

Genus Brickelliae arcte affine et eae habitu, involucri, etc. simillimum differt dentibus foliorum setiferis et praesertim achaeniis valde obcompressis 5–6-costatis.

Species hucusque cognitae 7 omnes mexicanae praecipue montanae et calciphilae locos umbrosos praeferentes, una (n. 1) excepta inter se arctissime affines characteribus quamquam saepe obviis tamen incertis et minus constantibus diagnoscendae.

*Clavis specierum.*

- a. Pubescentia pedicelli glandulifera. Corolla achaenio distincte brevior.  
     1. *B. glutinosa*.
- a. Pubescentia pedicelli non glandulifera. Corolla achaenium subaequans vel eo longior, b.  
     b. Folia arcte sessilia, c.  
         c. Capitula nutantia, involucri squamis subscariosis exterioribus cum ceteris contiguis . . . . . 2. *B. Pavonii*.
- c. Capitula erecta, involucri squamis majus herbaceis exterioribus subremotis . . . . . 3. *B. sessilifolia*.
- b. Folia saltem caulina petiolata, d.  
     d. Achaenia obscure in faciebus nervata, e.  
         e. Folia argute et grosse dentata, dentibus omnibus longiuscule setigeris. Capitula 17-23-flora . . . . . 4. *B. setosa*.
- e. Folia crenato-dentata, dentibus breviter setigeris vel setis ad apicem et dentes 1-3 posticos restrictis. Capitula 30-35-flora.  
     5. *B. subuligera*.
- d. Achaenia prominule et conspicue in faciebus 1-3-costata, f.  
     f. Inflorescentiae saltem secundariae conspicue dichotomae capitula saepe in dichotomis gerentes; pedicelli capitula longitudine aequantes vel superantes . . . . . 6. *B. laxiflora*.
- f. Capitula subsessilia in ramis elongatis paniculae. 7. *B. brevipes*.

1. *B. GLUTINOSA* Brandege, annua subsimplex vel pauciramea 1-2 dm. alta undique breviter denseque glandulo-puberula; caule subtereti purpurascens; foliis ovatis duplice crenato-serratis omnino esetosis tenuibus utrinque viridibus subtus vix pallidioribus supra minute papillis subtus resinoso-atomiferis 1-2 cm. longis 8-15 mm. latis basi subtruncatis vel subcoarctatis, petiolis 1-1.5 cm. longis; capitulis 1-5 in pedunculis axillaribus 4-50 mm. longis erectis vel leviter nutantibus ca. 25-floris; involucri campanulati 9 mm. alti squamis obtusis mucronulatisque oblongo-lanceolatis atropurpureis; corollis 3-6 mm. longis sursum in fauces subdistinctos ampliatis; styli ramis sursum valde incrassatis; achaeniis 4 mm. longis griseis vix costatis scabridis, pappi setis laete albis sursum scabridis achaenio brevioribus. — Zoe, v. 262 (1908). — In umbrosis montium Cerros dictorum prope San Luis Tlutiltanpa, Puebla, Mexico, *Purpus*, n. 2625. Species generis ob statutam minorem, indumentum purpureum glanduliferum, capitula pauca, styli ramos apice crassissimos distinctissimos.

2. *B. PAVONII* Gray, herbacea ramosa; foliis ovatis basi subcoarctatis vel subtruncatis tenuibus subduplice crenato-serratis ca. 3 cm. longis 2 cm. latis utrinque pubescentibus supra viridibus subtus pallidioribus, apice et dentibus paucis posticis setuliferis; capitulis laxo paniculatis 9 mm. altis ca. 15-floris in apice pedicelli gracilis 1 cm. longi nutantibus; involucri squamis anguste lanceolato-linearibus acutis subglabris

marginē tenuissimis scariosis; corolla achaenium subaequanti; costis achaenii nigrescentis sursum hispidulis, intervallis glabris. — Proc. Am. Acad. xvii. 206 (1882). *Eupatorium setiferum* et *E. cuspidatum* herb. Pavonii ex Grayo, l. c. — Mexico, hb. Pav. nunc hb. Boiss. Species ut videtur nunquam iterum lecta.

3. *B. SESSILIFOLIA* Greenman, caule erecto tereti crispe pubescenti 6 dm. alto superne oppositirameo; foliis arcte sessilibus late ovatis basi subtruncatis duplicē serratis acutis supra laete viridibus subtus paulo pallidioribus 2.5–4.5 cm. longis 1.4–3.5 cm. latis utrinque pubescentibus, dentibus apiceque setuliferis; panicula diffusa; capitulis graciliter et longiuscule pedicellatis ca. 17-floris; involucri squamis anguste lanceolatis attenuatis viridibus albicostatis, margine scariosa; corolla 4.8 mm. longa ad insertionem filamentorum obscure constricta, superne non ampliata; styli ramis leviter clavellatis; achaeniis nigrescentibus 3.5 mm. longis in facie interiori 1- obverse plerumque 3-costatis. — Proc. Am. Acad. xl. 35 (1904). — In collibus calcareis prope pagum Yautepec, Morelos, Mexico, *Pringle*, n. 9865; in rupibus calcareis convallis praeruptae Iguala, Guerrero, altitudine 915 m., *Pringle*, n. 10,322; et prope urbem Acapulco, *Palmer*, n. 625 (expeditionis Oct. 1894–Mar. 1895 factae).

4. *B. SETOSA* Gray, herba a basi decumbenti suberecta gracilis ca. 6 dm. alta; caule tereti rubescenti minute crispeque puberulo oppositirameo; foliis ovatis argute serrato-dentatis 1.2–3 cm. longis 8–15 mm. latis membranaceis utrinque viridibus tenuiter puberulis, petiolis 4 mm. longis; capitulis ca. 20-floris in axillis foliorum superiorum pedicellatis vel numerosioribus et in panicula plus minusve diffusa dispositis; involucri squamis anguste oblongo-lanceolatis attenuatis saepe purpurascens; corolla et pappi setis achaenium superantibus; achaeniis facie interiori planiusculis obscure 1-nervatis dorso 2-nervatis. — Proc. Am. Acad. xv. 29 (1879); Hemsl. Biol. Cent.-Am. Bot. ii. 102 (1881). *Barroetia setosa* (Gray) Hook. f. & Jacks. Ind. Kew. i. 276 (1895). — San Luis Potosi, altitudine 1830–2440 m., *Parry & Palmer*, n. 353; in collibus calcareis prope pagum Cardenas, San Luis Potosi, *Pringle*, nn. 3319, 3320.

5. *B. SUBULIGERA* (Schauer) Gray, perennis saepe basi suffrutescens; caulibus 1 vel saepe pluribus teretibus suberectis laxē ramosis fere a basi foliatis 4–8 dm. altis crispe tomentellis vel puberulis; foliis deltoideo-ovatis crenato-serratis utrinque pubescentibus vel puberulis 1–3 cm. longis 9–18 mm. latis, apice saepe obtusiusculo et dentibus saltem 1–3 posticis vel saepe omnibus cum setis munitis; capitulis ca. 30-floris 1 cm. altis; involucri squamis linearibus vel lineari-lanceolatis attenuatis plerumque viridibus; corollis gracilibus 5.5–7 mm. longis ad

insertionem filamentorum constrictis, faucibus vix ullis, limbi dentibus brevissimis; achaeniis 3-3.8 mm. longis, faciebus planiusculis vix nervatis. — Proc. Am. Acad. xv. 29 (1879); Hemsl. Biol. Cent.-Am. Bot. ii. 102 (1881). *Bulbostylis subuligera* Schauer, Linnaea, xix. 718 (1847). *Eupatorium? subuligerum* (Schauer) Gray, Pl. Wright. i. 86 (1852) ex Hemsl. l. c. sed combinatio a Grayo non expressim facta est. *Barroetia subuligera* (Schauer) Hook. f. & Jacks. Ind. Kew. i. 276 (1895). — In reipublicae mexicanae late distributa. HIDALGO: ad Zimapan, *Aschenborn*, n. 260 (specimen typicum, hb. Berol., fragmentis a cl. Eichlero benevolente missis in hb. Grayano etiam conservatis). CHIHUAHUA: in montibus Santa Eulalia, *Pringle*, n. 346; in convalle praerupta Bachimba, *Pringle*, n. 111. COAHUILA: ad Soledad, *Palmer*, n. 452 (anno 1880); prope Torreon, *Palmer*, n. 483 (anno 1898). ZACATECAS: prope Arroyo Cedros, *Kirkwood*, n. 35. DURANGO: ad Mapimi, *Palmer*, n. 519 (anno 1898).

Var. *LATISQUAMA* Greenman, foliis majoribus usque ad 5 cm. longis 3.5 cm. latis; capitulis paulo majoribus 30-35-floris; involucri squamis anguste lanceolati-oblongis purpurascentibus obtusis vel apice rotundatis et mucronulatis. — Proc. Am. Acad. xl. 35 (1904). — In collibus prope Etzatlán, Jalisco, *Pringle*, n. 8773.

6. *B. LAXIFLORA* Brandege, annua crispe puberula diffuse oppositifolia, ramis patente adscendentibus gracilibus; foliis late ovatis vel deltoideo-ovatis tenuibus grosse crenatis vel plus minusve argute dentatis utrinque tenuiter pubescentibus vel glabriusculis basi truncatis vel late cordatis ad insertionem petioli saepe breviter cuneatis apice saepe obtuso et dentibus plerisque posticis cum setis munitis; foliis caulinis 4-6 cm. longis 3-5 cm. latis graciliter ad 2.5 cm. longe petiolatis, ramealibus multo minoribus nunc ovato-oblongis nunc triangulari-lanceolatis 3-5 mm. longe petiolatis; capitulis graciliter saepius longiuscule pedicellatis 9 mm. altis 4.5 mm. diametro ca. 23-floris; involucri squamis anguste lanceolatis vel linearibus attenuatis viridibus albo-striatis, interioribus ad 7 mm. longitudine; corollis achaenia longitudine subaequantibus tubulosis sine faucibus ullis distinctis; achaeniis in facie interiori 1-costatis in facie exteriori 2-costatis in costis et etiam saepe inter eas sursum hispidulis. — Univ. Calif. Publ. Bot. iv. 93 (1910). — PUEBLA: Coxcatlán, *Purpus*, n. 4128. OAXACA: in convalle praerupta Tomellin dicta, altitudine 915 m., *Pringle*, n. 5968; Cuicatlán, altitudine 550-600 m., *Pringle*, n. 5799, *E. W. Nelson*, n. 1868. SINALOA: prope Culiacán, *Schaffner*, *Brandegee*. ALAMOS: *Palmer*, n. 677 (anno 1890).

7. *B. brevipes*, sp. nov., oppositifolia; caule tereti purpurascenti crispe pubescenti, internodiis folia multo superantibus; ramis elon-

gatis plus minusve flexuosis; foliis triangulari-ovatis late cordatis crenato-serratis apice et dentibus 1-3 latere utroque basin versus setigeris supra viridibus sparse pubescentibus subtus paulo pallidioribus in venis villosulis, caulinis ca. 3 cm. longis 2.5 cm. latis graciliter (praecipue inferioribus) petiolatis, ramealibus 1-2.5 cm. longis subsessilibus; capitulis ca. 18-21-floris numerosis brevissime pedicellatis vel subsessilibus in ramis paniculae longis flexuosis spiciformibus bracteatis interrupte dispositis; involucri squamis viridibus albo-costatis lanceolato-linearibus valde inaequalibus vix subuligeris, interioribus ca. 1 cm. longis; corollis gracillime tubulosis 4.3 mm. longis; achaeniis atrobrunneis valde compressis lineari-oblongis 3.6 mm. longis; pappi setis ca. 18 albis corollas aequantibus. — OAXACA: secundum viam ad Cuicatlan altitudine 2075-2380 m., 3 Oct. 1894, *E. W. Nelson*, n. 1520 (specimen typicum in herb. Grayano conservatum). Species capitulis subsessilibus facile diagnoscenda.

### III. ON SOME HITHERTO UNDESCRIBED OR MISPLACED COMPOSITAE.

*Microglossa mespilifolia* (Less.), comb. nov. *Aster mespilifolius* Less. Syn. Comp. 180 (1832). *Nidorella mespilifolia* (Less.) DC. Prod. v. 321 (1836). *Microglossa mespiloides* Benth. & Hook. f. Gen. ii. 282 (1873), without express combination and with obvious clerical error as to the specific name; Hook. f. & Jacks. Ind. Kew. ii. 229 (1895).

*Psiadia Boivini* (Klatt), comb. nov. *Pluchea Boivini* Klatt, Ann. Sci. Nat. ser. 5, xviii. 369 (1873). As suspected by Cordemoy, Fl. de l'Île de la Reunion, 526 (1895), this species proves on examination of Dr. Klatt's type (now in the Gray Herbarium) to have the characters of a *Psiadia* and not of a *Pluchea*. The anthers, for instance, are entire and rounded at the base and not caudate. Whether or not Cordemoy's *Psiadia Frappieri* may prove a synonym is a point which cannot be determined from description alone. In any event, however, the earlier specific name of Klatt would have to prevail.

*Pluchea rubelliflora* (F. v. Muell.), comb. nov. *Eyrea rubelliflora* F. v. Muell. Linnaea, xxv. 403 (1852-53). *Pluchea Eyrea* F. v. Muell. Rep. Babb. Exp. 11, 12 (1858); Benth. Fl. Austral. iii. 528 (1866). — The restoration of von Mueller's earlier specific name becomes necessary under the International Rules of Nomenclature.

*Rutidosia multiflora* (Nees), comb. nov. *Stylancerus multiflorus* Nees in Lehm. Pl. Preiss. ii. 244 (1846-47). *Pumilo argyrolepis* Schlecht. Linnaea, xxi. 448 (1848). *Actinopappus perpusillus* Hook. f.

and *A. Drummondii* Gray in Hook. Jour. Bot. and Kew. Misc. iv. 226 (1852). *Pumilo Preissii* Sonder, Linnaea, xxv. 487 (1852-53). *Rutidosis Pumilo* Benth. Fl. Austral. iii. 595 (1866). It is obvious that Bentham's specific name *Pumilo*, though long current, cannot stand under the International Rules, since it is antedated by several other names. Of the various designations under which the plant has been described, Nees's *Styloncerus multiflorus* bears the earliest date. It was published in the second fascicle of the second volume of Lehmann's *Plantae Preissianae*, and the preface of this volume, which included three fascicles, was dated November, 1847. Meisner under date of July, 1848, speaks (*Flora*, 1848, p. 496) of the second and third fascicles of the second volume of Lehmann's work as just issued, an expression, which at least so far as it concerns the second fascicle presumably means sometime during the spring or early summer of 1848. Schlechtendal's *Pumilo argyrolepis* was also published in 1848, a circumstance raising no small doubt as to the relative priority of these names. Yet it is to be noted that on a preceding page of his paper (*Linnaea*, xxi. 444) Schlechtendal refers to an article in the issue of the *Botanische Zeitung*, dated 26 May, 1848, proving that Schlechtendal's own publication must have been distinctly later. Indeed, it is shown therein that in the meantime added plants had been found by one of his correspondents, had been sent for identification, were studied, described, and the descriptions had reached print, all of which is not likely to have happened between the end of May and July, when as stated by Meisner fascicles 2 and 3 of the second volume of the *Plantae Preissianae* had already been issued (at what previous date we do not know). There is certainly nothing to show that the paper of Schlechtendal preceded that of Nees. In default of such evidence, precedence may be determined by the second clause of Article 39 of the International Rules, which reads: "In the absence of proof to the contrary the date placed on the work containing the name or combination of names is regarded as correct." This, in the case of Nees's *Styloncerus multiflorus* is, as we have seen, "1846-47," while with Schlechtendal's *Pumilo argyrolepis* it is 1848.

ORIGIN AND IDENTITY OF PHARETRANTHUS. The genus *Pharetranthus* Klatt, published in *Flora*, lxviii. 203 (1885), was founded on specimens collected by Hugh Cuming (no. 2454). These were supposed to have come from the Philippine Islands both by Klatt, who described them, and by Schultz Bipontinus, who seems to have made a preliminary examination of them. The genus was tentatively placed in *Coreopsis* by O. Hoffmann in *Engl. & Prantl, Nat. Pflanzenf.* iv. Ab. 5, 243 (1890), an opinion which he later — *l. c.* iv. Ab. 5, 390 (1894),



and Nachtr. zu iv. Ab. 5, 325 (1897)—revised by referring *Pharetranthus* Klatt to *Petrobium* R. Br. While the name *Petrobium* R. Br. must, according to the International Rules of Nomenclature, give way to the earlier and adequately published name of *Laxmannia* Forst. & Forst. f., the identity of *Pharetranthus*, supposedly of the Philippine Islands, with this peculiar monotypic genus, of the island of St. Helena, presents a taxonomic and geographic problem which seems never to have been discussed. Such an identity is certainly improbable on phytogeographic grounds, especially in the case of a species wholly unknown from intermediate localities. Dr. Klatt's type of his *Pharetranthus ferrugineus* is preserved in the Gray Herbarium, and in fact appears to be identical with *Laxmannia* Forst. & Forst. f., the "White-wood Cabbage-tree" of St. Helena. Examination of accessible works on the Philippine flora, including Mr. Elmer's recent enumeration of the *Compositae* of the Philippine Islands, fails to show any record of the species in question. Under these circumstances it seems highly probable that there was some confusion of labels or other slip or error in attributing the plant of Cuming to the Philippine Archipelago. In this connection it is to be noted with interest that on his return voyage Hugh Cuming stopped at St. Helena, where it is more than likely that he obtained the material upon which Dr. Klatt later founded his genus *Pharetranthus*. At all events such an origin would appear to be a permissible assumption or at least a justifiable working hypothesis until the plant can be re-discovered in the Philippine Islands if this ever happens. The synonymy of the species in question is as follows :

*LAXMANNIA ARBOREA* Forst. & Forst. f. Char. Gen. 94, t. 47 (1776). *Spilanthes arborea* (Forst. & Forst. f.) Forst. f. Com. Hort. Goett. ix. 67 (1787). *Spilanthes tetrandra* Roxb. in Beatson's Tracts, 301 (1816), which was the sterile plant, and *Bidens arborea* Roxb. l. c. (1816), which was the corresponding fertile plant. *Petrobium* R. Br. Trans. Linn. Soc. xii. 113 (1816). *P. arboreum* R. Br. ex DC. Prod. v. 502 (1836). *Drimyphyllum Helenianum* Burch. ex DC. l. c. (1836). *Pharetranthus ferrugineus* Klatt, Flora, lxviii. 204 (1885).

*TRAGOCERAS SCHIEDEANUM* Less. Linnaea, ix. 269 (1834). To the synonymy of this species should be added *Baltimora monocephala* Klatt, Ann. k. k. Naturh. Hofmus. Wien, ix. 360 (1894), a species founded upon a specimen collected by Knechtel at Chapultepec, Mexico, and now in the Gray Herbarium. The identity appears first to have been noted by Dr. J. M. Greenman, but seems not to have been hitherto recorded in print.

*Monactis subdeltoidea*, sp. nov., fruticosa ramosa ; ramis flexuosis crassiusculis subteretibus vix striato-angulatis brunnescentibus tomen-



tellis, indumento e pilis multicellularibus tenuissimis plus minusve inter se implexis composito; foliis alternis subdeltoideo-ovatis acutis nec acuminatis basi subtruncatis glandulari-denticulatis (glandulis inter se 3-5 mm. distantibus) supra tenuiter sed densiuscule pubescentibus subtus molliter tomentosis canescentibus, lamina 5-6 cm. longis 3-3.5 cm. latis paulo supra basin 3-nervata; petiolo cuneato-alato ca. 1.2 cm. longo ad insertionem laminae usque ad 7 mm. latitudine expanso; inflorescentia planiuscula multicapitulata, bracteis lanceolatis subsessilibus; capitulis radiatis 7 mm. altis, disco ca. 7 mm. diametro; involucri campanulati squamis sub-triseriatim imbricatis arcate appressis ovato-oblongis obtusis sordide lanoso-tomentosis; flosculis radialibus ca. 6 ♀, ligulis late oblongis vel ellipticis apice brevissime 3-dentatis 5-7 mm. longis 3-3.6 mm. latis laete flavis, tubo ca. 1.5 mm. longo plus minusve piloso; flosculis disci ca. 25 ♀, corollis flavidis, tubo 1.5 mm. longo faucibus subcylindricis 2 mm. longis, limbi dentibus 5 breviter triangularibus; acheniis immaturis prismaticis 2.7 mm. longis omnino calvis glabriusculis. — On banks of the Machangara River, near Quito, Ecuador, 2750 m. altitude, 21 January, 1856; *W. Jameson*, no. 162 (type, in Gray Herb.). From the original *M. flaverioides* HBK. of Venezuela, as well as from the recent *M. Jelskii* Hieron. of Peru, the present species differs in its many-flowered heads, the disk-flowers being about 25, while in *M. flaverioides* they are said to be 5-10 and in *M. Jelskii* they are 6-7. Furthermore, the form of the leaf in the Ecuadorean plant is very different from either of the other species, the blade being more nearly deltoid with a truncate base somewhat sharply distinguishable from the cuneately winged petiole.

**Montanoa tehuacana**, sp. nov., fruticosa vel arborescens 3-5 m. alta ramosa; ramis plerisque oppositis divergentibus arcuato-adscendentibus foliosis leviter striatis tenuissime puberulis juventate brunneis deinde griseis; foliis oppositis, supra pallide viridibus scabris et cum pilis brevissimis basi incrassatis munitis, subtus canescenti-tomentellis reticulato-venosis, inferioribus 2 dm. longis 1.6 dm. latis patente trilobatis, lobis lateralibus latis crenato-angulatis, lobo terminali variabili vel obtuso vel acuto vel etiam acuminato in eodem specimine, petiolo usque ad 8 cm. longo in parte superiori cuneato-alato; foliis superioribus, i. e. ramulorum floriferum obovato-oblongis firmiusculis obtusis supra rugosis ca. 4 cm. longis ca. 1.5 cm. latis obsolete crenulato-serratis basi brevissime petiolatis et (supra petiolum) cordato-biauriculatis, auriculis rotundatis; capitulis laxo corymbosis graciliter pedicellatis ca. 3 cm. diametro (ligulis inclusis); involucri squamis ovato-lanceolatis anthesi ca. 6 mm. longis griseo-tomentellis; paleis a basi late ovata membranacea pallida in apicem longum spinosum

patentem abrupte contractis.—Tufa bluffs near Tehuacan, Puebla, Mexico, 1680 m. altitude, 7 August, 1901, *C. G. Pringle*, no. 8585 (type, in Gray Herb.); in the vicinity of San Luis Tultitlanapa, Puebla, near Oaxaca, August, 1908, *C. A. Purpus*, no. 3105 (Gray Herb.) and no. 3104 (Gray Herb.). The last-mentioned specimen has the upper leaves closely sessile instead of being provided with the usual very short wingless petioles beneath the auricles, but the plant is otherwise so closely identical that it must be inferred that this variation is merely formal and trifling. The affinity of the species is clearly with *M. Pringlei* Robinson & Greenman, Proc. Am. Acad. xxxiv. 512 (1899), which, however, has leaves of quite a different type of serration and the involucre bracts of a peculiar obovate-spatulate form.

*LEPIDESMIA SQUARROSA* Klatt, Bull. Herb. Boiss. iv. 479, t. 7 (1896). This species, the type of a newly distinguished as yet monotypic genus, was founded upon a plant collected in dry places at Caimanera, Cuba, by von Eggers, May, 1889 (no. 5439). Dr. Klatt was inclined to regard his genus as being of the *Eupatorieae Ageratinae* and very nearly related to *Aschenbornia*. Hoffmann in Engl. & Prantl, Nat. Pflanzenf. Nachtr. 321, 322 places *Lepidismia* next *Ageratum* and distinguishes it from that genus chiefly by the more imbricated involucre scales. However, even a cursory inspection of the type of *Lepidismia*, as represented by fragments in the herbarium of the late Dr. Klatt, led the writer to believe that the plant could not belong among the *Eupatorieae*, and a careful dissection has shown that the style-branches, instead of having the clavate unappendaged form found in the *Eupatorieae*, are divided into a basal rather short thickish and somewhat compressed portion surmounted by a rather elongated attenuate and papillose appendage in the manner of many *Heliantheae*. In fact, it seems probable that the genus should be placed near *Isocarpus* R. Br. In habit, as well as in technical characters, it is not very unlike *I. oppositifolia* R. Br., which also possesses opposite leaves, which are lanceolate and subsessile, glomerate heads with subscarios involucre and chaffy receptacle. However, the distinct pappus, much smaller heads, and flattish receptacle furnish ample generic distinctions.

*IOSTEPHANE TRILOBATA* Hemsl. Biol. Cent.-Am. Bot. ii. 169 (1881). With this species the following appear to be identical: *Rudbeckia chrysantha* (Sch. Bip.) Klatt, Leopoldina, xxiii. 143 (1887), page 3 of reprint, and *Echinacea chrysantha* Sch. Bip. acc. to Klatt, l. c. (1887), page 4 of reprint. The species of Schultz Bipontinus seems never to have been described until taken up and transferred to *Rudbeckia* by Klatt. It rested upon Liebmann's no. 575, collected at Cubre de Estepa, Mexico. In the herbarium of the late Dr. Klatt, a collection

now incorporated in the Gray Herbarium, there is a single head and an excellent sketch of Klatt's type, both of which clearly show the species to have been an *Iostephane*, identical so far as can be seen with the earlier *I. trilobata* of Hemsley. Here also should be placed, as it appears, the recently published *Gymnolomia scaposa* Brandegee, Univ. Calif. Publ. Bot. iv. 93 (1910).

**Perymenium Peckii**, sp. nov., fruticosum gracile 3-9 m. altum in plantis adjacentibus se suffulciens quasi scandens; caule tetragono scabro in speciminibus siccatis 4-sulcato brunneo, internodiis 4-5 cm. longis; foliis oppositis lanceolatis tenuibus graciliter petiolatis acuminatis obscure et remote serrulatis 3-nerviis basi rotundato-subacutis 5 cm. longis 1.5 cm. latis supra viridibus minute et adpresse pilosis subtus distincte pallidioribus molliter pubescentibus fere tomentosis non solum in nerviis sed etiam inter eas; petiolo 7-9 mm. longo; panicula oppositifolia oboidea foliaceo-bracteata 1.3 dm. longa 1 dm. diametro, ramis curvato-adscendentibus, corymbulis ca. 2 cm. diametro 5-7-capitulatis, pedicellis gracilibus 2-8 mm. longis; capitulis ca. 5-radiatis 6 mm. altis; involucri ovoidei squamis inaequalibus late ovatis obtusis strigillosis; ligulis albidis apice profunde 2-3-dentatis vel etiam lobatis ca. 4 mm. longis fertilibus; flosculis disci ca. 15; acheniis valde immaturis compressis oblanceolatis; pappi aristis ca. 10 valde inaequalibus stramineis scabridis. — In openings in the forest, British Honduras, *Prof. Morton E. Peck*, no. 284 (type, in Gray Herb.). This species is most nearly related to *P. microcephalum* Sch. Bip., which, however, has longer bright yellow ligules nearly entire at the tip, and leaves of a very different pubescence, the lower surface being nearly smooth except along the strigillose nerves.

VERBESINA CARACASANA Robinson & Greenman, Proc. Am. Acad. xxxiv. 559 (1899). This species, hitherto known only from Venezuela, may be recorded from Colombia, where it was collected in Santa Marta, November, 1898-1901, altitude 460 m., by *H. H. Smith*, no. 510 (Gray Herb.). Mr. Smith's specimen examined is immature (still in bud), but shows clear identity with the Venezuelan plant. It was distributed as *V. diversifolia* DC., a species which has alternate leaves and many other differences.

**Verbesina columbiana**, sp. nov., ubique griseo-puberula verisimiliter herbacea alta robusta; caule teretiusculo exalato striato-angulato medullosa; foliis alternis pinnatifidis 2-3 dm. longis 1.2-1.7 dm. latis utrinque griseo-viridibus dense et scabriuscule puberulis, lobis ca. 7, oblongis vel oblongo-lanceolatis acuminatis serrulatis 1-7 cm. longis 0.7-2.5 cm. latis; petiolo 6-8 cm. longo bialato 1.5-1.7 cm. latitudine basi biauriculato; inflorescentia composite corymbosa plana

2.5 dm. diametro multicapitulata griseo-tomentella, pedicellis filiformibus 6-8 mm. longis; capitulis ovoideo-subglobosis ca. 38-floris anthesi ca. 5 mm. diametro; involucri squamis oblongis acutis vel acuminatis pallidis dorso molliter puberulis, extimis multo brevioribus apice obtusiusculis vel etiam rotundatis crassiusculis nigrescentibus; flosculis liguliferis ca. 5 pistilliferis, ligulis albis subquadratis 3-dentatis 2.5 mm. longis, tubo 2 mm. longo tomentello; corollis disci 3.5 mm. longis, tubo et faucibus tomentellis; acheniis obovatis late bialatis, faciebus plus minusve in media parte carinatis sursum scabridis vel tuberculatis, pappi aristis 2 subaequalibus. — Santa Marta, Colombia, December, 1898-1901, altitude 75 m., *H. H. Smith*, no. 671 (type, in Gray Herb.); also from the banks of the Magdalena River, Quematido, Colombia, 5 December, 1875, *André*, no. 222 (Gray Herb.). The latter specimen is said to have been herbaceous and 3-5 m. high. Mr. Smith's plant was distributed as *V. gigantea* Jacq., but it differs from that species of the Antilles in having heads about 38-flowered instead of about 20-flowered, in having broadly winged achenes, and in details of foliage and involucre. The related *V. myriocephala* Sch. Bip. of Mexico also has smaller subcylindric about 20-flowered heads and narrowly winged achenes.

*Verbesina costaricensis*, sp. nov., herbacea vel basi lignescenti alta; caule teretiusculo leviter striato-angulato glabro exalato purpurascenti glaucescenti meduloso; foliis alternis magnis longipetiolatis profunde pinnatifidis 1.5-2 dm. longis 1-1.4 dm. latis supra dense scabro-pubescentibus atroviridibus subtus pallidioribus molliter pubescenti-tomentellis, lobis ca. 11 lanceolato-oblongis acuminatis obsolete subremoteque serrulatis 7-10 cm. longis 2-3.5 cm. latis, rhachi alato 1-1.3 cm. lato, sinubus rotundatis; corymbis compositis terminalibus planiusculis multicapitulatis 1.5 dm. diametro basi foliaceo-bracteatis; capitulis obovoideis discoideis 8 mm. altis 5 mm. diametro; involucri squamis exterioribus valde inaequalibus anguste oblongis apice subherbaceis nigrescentibus rotundatis vel vix mucronulatis 1-4 mm. longis interioribus subaequalibus ca. 6 mm. longis tenuibus diaphanis acutiusculis glabriusculis margine erosis; flosculis liguliferis nullis, eis disci ca. 21; corollis 3.6 mm. longis, tubo proprio plus minusve contracto strigilloso brevi, faucibus cylindricis tubo duplo longioribus, limbi dentibus oblongo-lanceolatis; achaeniis compressis oblanceolatis sursum hispidulis basin versus attenuatis tenuiter costatis marginatis vix alatis; pappi aristis saepius 3 achaenium subaequantibus duabus inter se contiguis in angulo interiori, tertia eis opposita. — *V. nicaraquensis* J. D. Sm. Enum. Pl. Guat. v. 44 (1899), not Benth. — Rio Virilla, San José, Costa Rica, altitude 1100 m., December, 1895, *Ad. Tondus*

no. 9833 herb. nat. Cost. (= no. 7068 distrib. J. D. Sm.). This plant is clearly distinct from *V. nicaraguensis* Benth., which has 8-10-rayed heads, widely winged achenes, and a different leaf-contour.

*Verbesina gigantoides*, sp. nov., robusta alta; caule crasso tereti-usculo purpurascenti glaberrimo plus minusve pruinoso intus cum medulla alba constipato; foliis alternis pinnatifidis longe petiolatis firmiusculis supra glaberrimis lucidulis plus minusve ruguloso-bullatis subtus olivaceis molliter pubescentibus 2-3 dm. longis 1-2.5 dm. latis, rhachi alata ca. 2 cm. lata, lobis ca. 11 lanceolatis caudato-attenuatis saepe falcatis integerrimis vel obscure undulatis 8-15 cm. longis 2.5-4 cm. latis, infimis reflexis; sinus rotundatis; petiolo tereti-usculo purpurascenti glaberrimo omnino exalato; panicula ampla valde convexa pubescenti; bracteolis lineari-filiformibus; pedicellis 3-6 mm. longis; capitulis numerosissimis 5 mm. diametro 7 mm. altis ca. 20-floris; involucri squamis obovato-vel oblanceolato-oblongis abrupte acutiusculis margine ciliata excepta glabriusculis; flosculis liguliferis ca. 4-5 pistilliferis; ligulis albis oblongis 3.5 mm. longis apice leviter 3-dentatis; flosculis disci ca. 15, corolla albida subcylindrica, tubo pubescenti, limbi dentibus 5 oblongo-lanceolatis; antheris linearibus nigrescentibus vix connatis; achaeniis 3.5 mm. longis pyriformibus anguste alatis deorsum valde attenuatis, alis ciliato-laceris, pappi aristis 2 subaequalibus ca. 2 mm. longis. — *V. gigantea* Robinson & Greenman, Proc. Am. Acad. xxxiv. 561 (1899), in part, not Jacq. — From near Yajalon, Chiapas, Mexico, 21 November, 1895, *E. W. Nelson*, no. 3423 (type, in Gray Herb.). This is one of several habitally similar plants, which have been in a preliminary way referred to *V. gigantea* Jacq. Happily, through the careful definition and segregation of the West Indian species by Prof. Urban, Symb. Ant. v. 264-265 (1907), it has become possible to interpret more definitely the continental forms of this group.

*Verbesina leucactinota*, sp. nov., perennis verisimiliter herbacea robusta alta griseo-tomentella; caule subtereti leviter striato exalato; foliis alternis pinnatifidis supra viridibus scabriusculo-puberulis subtus molliter griseo-tomentellis 2 dm. vel ultra longitudine 1.3 dm. latis saepius 9-lobis; lobis lanceolatis 4-7 cm. longis attenuatis 1.3-2.3 cm. latis, sinus rotundatis; petiolo late bialato basi cum auriculis magnis amplexicauli sed alis in caule non decurrentibus; inflorescentia paniculata magna valde convexa; bracteis foliaceis anguste lanceolato-oblongis acutis integris 4-8 cm. longis ca. 1 cm. latis basi biauriculatis; capitulis ca. 27-floris conspicue radiatis; flosculis liguliferis ca. 5; ligulis ellipticis albis breviter apice 3-dentatis 4 mm. longis; corollis disci albidis 3 mm. longis; antheris nigrescentibus conspicue exsertis;

achaeeniis valde immaturis oblanceolatis; pappi aristis 2 subaequalibus achaenium subaequantibus. — *V. diversifolia* Britton, Bull. Torr. Bot. Club, xix. 150 (1892), not DC. — Coripati, Yungas, Bolivia, April, 1894, *Bang*, no. 2135 (type, in Gray Herb.). Though doubtfully referred to *V. diversifolia* DC. by Robinson & Greenman, Proc. Am. Acad. xxxiv. 562 (1899), this plant with wingless stem and about 9-lobed leaves now seems clearly distinct from that Brazilian species. It is nearer *V. gigantea* Jacq., from which, however, it differs in its more numerous rays, more strongly auriculate petioles, harsher pubescence, and in many other details. From *V. columbiana*, here described, it differs in its smaller less numerous flowered heads, more developed rays, etc. It is also near *V. myriocephala* Sch. Bip. of Mexico, but differs in its more convex inflorescence, scabrous-puberulent stem, narrow elongate and entire bracts, etc.

**Verbesina** (§ *Lipactinia*) *oligantha*, sp. nov., fruticosa 2-3 m. alta; caule teretiusculo exalato griseo scabrido-puberulo aetate lenticellis parvis late ellipticis brunneis aspero; foliis oppositis rhomboideo-ovatis 1.2-1.6 dm. longis 5-7 cm. latis acuminatis serratis basi cuneatis integris utrinque viridibus scaberrime puberulis, nerviis lateralibus principibus 3-4 plus minusve ex eodem loco (2-3 cm. supra basin) oriuntibus, ceteris remotioribus et pinnatim locatis; petiolo 1-1.5 cm. longo crispe et scabride puberulo; cymis compositis planis multicapitulatis densiusculis basi foliaceo-bracteatis, pedicellis filiformibus erectiusculis 1-7 mm. longis; capitulis 12 mm. altis 4 mm. diametro saepissime 7-floris; involucri squamis valde inaequalibus, exterioribus multo brevioribus ovatis 2-3 mm. longis interioribus oblongis abrupte acuminatis 6 mm. longis flosculos amplectentibus; corollis omnibus tubulosis flavis; achaeeniis valde compressis oblanceolatis olivaceis in faciebus paulo pubescentibus apicem versus angulo interiori anguste alatis. — In granitic soil, Jimalcota, Mexico, altitude 300 m., 18 November, 1898, *E. Langlassé*, no. 644 (type, in Gray Herb.). It is clear that this species is closely related to *V. pauciflora* Hemsl. but it differs markedly in its less conspicuous but more scabrous pubescence, its broadly rhombic-ovate leaves, and in its less herbaceous much smoother involucre.

**Calyptocarpus** *blepharolepis*, sp. nov., annuus prostratus multicaulis et fere a basi patente oppositirameus; caulibus ramisque gracilibus teretibus striatulis flexuosis cum pilis albis hirsutulo-pubescentibus plerumque bis bifurcatis; internodiis saepe longissimis; foliis oppositis petiolatis spatulato-obovatis integris apice rotundatis mucronulatis utrinque cum pilis albis basi incrassatis strigosis 2-2.5 cm. longis 1.1-1.4 cm. latis subtus distincte pallidioribus, petiolis 1 cm. longis hir-

sutis; capitibus in bifurcis arcte sessilibus 1.4 cm. diametro multifloris; involucri squamis oblongis biseriatim imbricatis subaequalibus abrupte acuminatis dorso glabriusculis leviter striatis margine conspicue albociliatis; flosculis liguliferis ca. 8, ligulis brevissimis ovatis crassiusculis albidis viridi-striatulis vix 1.5 mm. longis pistilliferis, achaenio striatulo glabriusculo exalato apice longiuscule divaricatim 3-aculeato; pappi aculeis ca. 3 mm. longis; disci flosculis numerosis, achaeniis muricatis. — Tensaw, Alabama, 18 August, 1904, *S. M. Tracy*, no. 8946 (type, in Gray Herb.). This plant, distributed as *Calyptracarpus tampicanus* Small, differs markedly from that species in its spatulate-obovate leaves, larger closely sessile heads, and especially in its involucreal scales. These are dorsally nearly glabrous but on the edges conspicuously ciliate, while in *Calyptracarpus vialis* Less. (*Oligogyne tampicana* DC., *Calyptracarpus tampicana* Small) the condition is reversed, that is to say the involucreal scales are dorsally strigose-pubescent but the margin nearly or quite free from ciliation. The discovery of a second and clearly distinct species of the hitherto monotypic *Calyptracarpus* is of interest. From the weedlike nature and wide distribution of its Texano-Mexican congener, there must be some doubt whether the plant here described will prove really indigenous in its Alabama habitat, or whether it may not ultimately be found to be an introduction from some other region.

*Balduina angustifolia* (Pursh), comb. nov. *Bupthalmum angustifolium* Pursh, Fl. ii. 564 (1814). *Actinospermum angustifolium* (Pursh) Torr. & Gray, Fl. ii. 389 (1842). The distinctions by which some recent efforts have been made to separate the genera *Actinospermum* and *Balduina* do not appear to the writer to be of generic validity. The genera being united, priority of specific name requires the new combination here proposed.

*Senecio fimbriiflorus* (Cass.), comb. nov. *Eupatorium auriculatum* Lam. Encyc. ii. 411 (1786), a specific name not available because of *Senecio auriculatus* Burm. f. Fl. Ind. 181 (1768). *Eupatorium scandens* Link, Enum. ii. 307 (1822) according to Lessing, Syn. Comp. 392 (1832), this name also not available because of the now valid homonym *Senecio scandens* Buch.-Ham. ex D. Don, Prod. Fl. Nepal. 178 (1825). *Cacalia fimbriiflora* Cass. Dict. xlviii. 460 (1827). *Senecio deltoideus* Less. Syn. Comp. 392 (1832). *Mikania auriculata* Willd. Sp. Pl. iii. 1745 (1804).

*Senecio pyrifolius* (Bojer), comb. nov. *Trixis pyrifolia* Bojer ex DC. Prod. v. 195 (1836). *Mikania pyrifolia* DC. l. c.; Klatt in Engl. Bot. Jahrb. xii. Beibl. 27, p. 22 (1890). *Senecio curvatus* Bak. Jour. Linn. Soc. xx. 190 (1883). The identity of *Mikania pyrifolia* (Bojer) DC.



and the much later *Senecio curvatus* Bak. was recently noticed by the writer on successively examining the types preserved in the DeCandolle and Kew herbaria respectively. The identity appears to have been previously inferred by Dr. F. W. Klatt, for after determining Hildebrandt's no. 3626 as *Mikania pyrifolia* in Engl. Bot. Jahrb. xii. Beibl. 27, p. 22 (1890), he later cites the same number as *Senecio curvatus* Bak. in Ann. k. k. Naturh. Hofmus. Wien, vii. 299 (1892). Although the name *Senecio pyrifolius* was used in manuscript by von Martius for a Brazilian species, it was published only as a synonym of *Senecio ellipticus* DC. Prod. vi. 420 (1837) by Baker in Mart. Fl. Bras. vi. pt. 3, 318 (1884). This use of the name, especially as unaccompanied by independent description and therefore incapable of revival, seems in no way to preclude the new combination here made for the plant of Madagascar.

*Saussurea baicalensis* (Adams), comb. nov. *Liatris baicalensis* Adams, Mém. Soc. Nat. Mosc. v. 115 (1817). *Carphephorus baicalensis* DC. Prod. v. 132 (1836). *Saussurea pycnocephala* Ledeb. Ic. Fl. Ross. i. 15, t. 59 (1829), Fl. Alt. iv. 14 (1833), & Fl. Ross. ii. 661 (1845-46), which see for detailed synonymy. As Adams's original description of this species is excellent and detailed there seems no reason why according to present nomenclatorial rules the earliest though long-neglected specific name should not be restored as indicated above. The association of the species with *Liatris*, to which it has considerable habitual resemblance, was not unnatural at a time when the relatively obscure tribal distinctions of the *Compositae* were unknown.



